



# Percentage of physically active children and adolescents

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**Percentage of children who meet the moderate-to-vigorous physical activity (MVPA) guidelines, defined as 60 minutes or more of at least moderate intensity activity on 5 or more days a week**

This fact sheet gives an overview and assessment of the physical activity level in children and adolescents of the WHO European Region, using the moderate-to-vigorous physical activity (MVPA) guidelines established by Prochaska et al (1). Data on the proportion of children reporting that they are moderately physically active for at least 60 minutes on most days of the week were drawn from the Health Behaviour in School-aged Children (HBSC) study (2001/2002) (2). These data are interpreted taking the health, environmental and policy contexts into account, followed by an assessment of the situation in the Region.

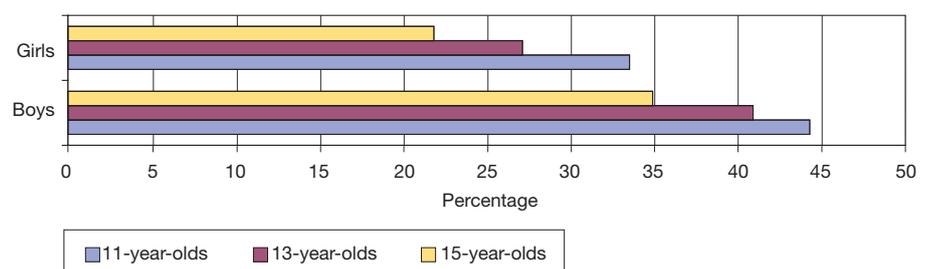
## KEY MESSAGE

 Regular physical activity is a major component in preventing the growing global burden of NCDs and conditions such as obesity and excess body weight. Levels of physical activity among children are, however, very low in most countries of the Region. The HBSC 2001/2002 study indicated that a substantial proportion of children and adolescents in all countries and sub-regions did not follow recommended guidelines for physical activity (2). Urgent action addressing different population groups, involving different sectors and acting on different levels is needed to increase the opportunities for children and adolescents to be and remain physically active in all settings of their daily lives. Regular monitoring of the situation is essential.

## RATIONALE

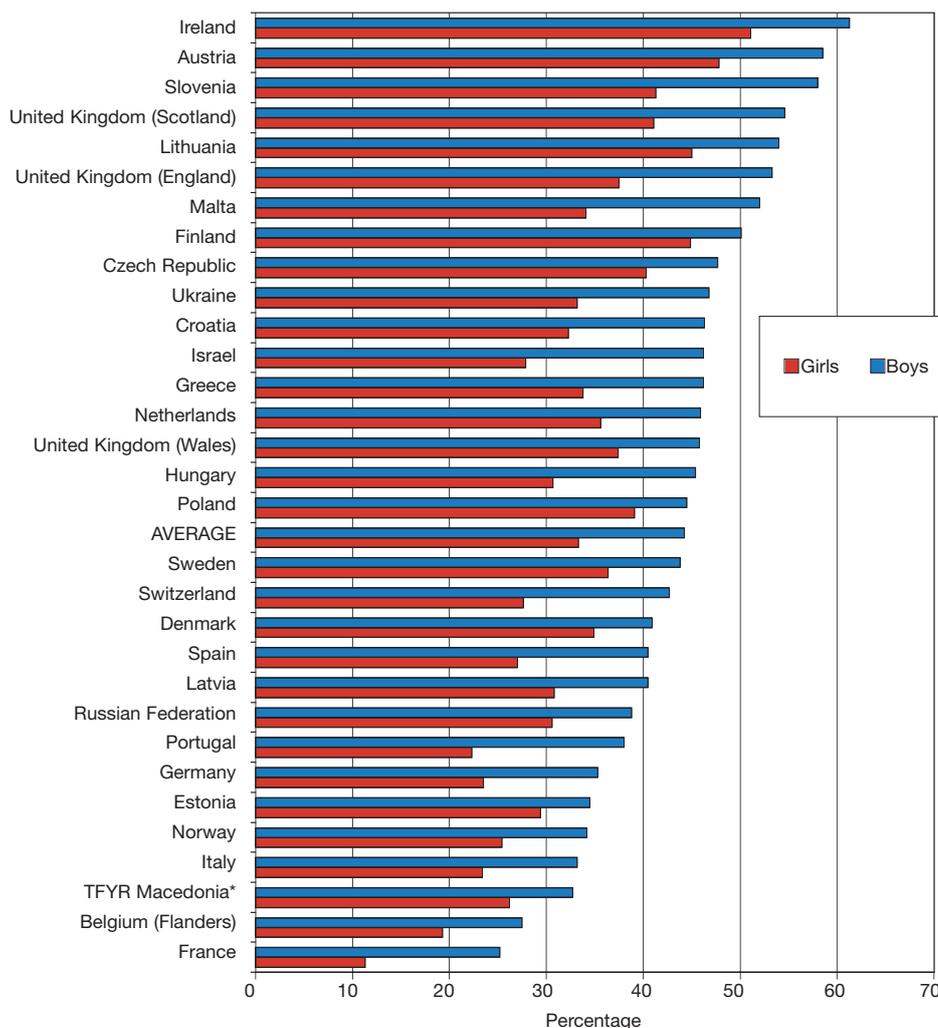
There is strong evidence that physical activity helps to prevent a number of prevalent and serious non-communicable diseases (NCDs) and conditions such as obesity, cardiovascular disease and certain cancers. Essential elements in strategies to reduce obesity are the promotion of physical activity through health education and awareness programmes and the provision of opportunities for physical activity. These will bring significant public health gains. This indicator assesses physical activity levels in a standardized way and allows for analysis in relation to action indicators and comparisons through a commonly defined measure.

**Fig. 1. Average proportion of physically active children aged 11, 13 and 15 years, selected countries in the WHO European Region, 2001/2002 (%)**



Source: Health Behaviour of School-aged Children (HBSC) study (2001/2002) (2).

**Fig. 2. Physical activity in 11-year-old children, selected countries in the WHO European Region, 2001/2002 (%)**



\*TFYR Macedonia = The former Yugoslav Republic of Macedonia

Source: Health Behaviour of School-aged Children (HBSC) study (2001/2002) (2).

## PRESENTATION OF DATA

Figure 1 shows the average proportion of physically active children in three age categories in the HBSC countries. It illustrates an observed decrease in physical activity with age in both genders.

Figure 2 uses self-reported data from the countries participating in the HBSC survey (see below under Geographical coverage) to show the proportions of 11-year-old boys and girls who were physically active at the level recommended by the MVPA guidelines (2). About one third of all the children (38.8%) reported taking physical activity at this level.

## HEALTH – ENVIRONMENT CONTEXT

Lack of physical activity, along with poor nutrition and smoking is one of the main contributors to disease and poor quality of life. On the other hand, regular physical activity,

along with a healthy diet and not smoking, plays a major role in the prevention of NCDs and conditions such as obesity, type II diabetes, high blood pressure, cardiovascular diseases, some forms of cancer, blood fat disorders, the loss of bone mass and other health problems. Further, physical activity has been found to have positive effects on lung disease, degenerative arthritis, muscular rheumatism, chronic fatigue symptom and depression. In virtually all NCD states, there is moderate-to-strong evidence that physical activity improves quality of life and the ability to carry out everyday tasks. It has also been found to help reduce violence and promote social interaction and integration. At national level, it provides a cost-effective way of improving public health throughout the population; at the same time, promoting physical activity offers win-win opportunities to address issues such as healthy urban planning, sustainable transport and improved traffic safety through collaboration with other sectors (3–6).

Despite these clear benefits, the World health report 2002 (7) estimated that insufficient physical activity was associated with 600 000

deaths per year (6% of total deaths) and 5.3 million disability-adjusted life-years (DALYs) (3.5% of total DALYs). In many countries, a significant proportion of health expenditure is related to costs incurred by lack of physical activity and obesity. Increasing incidences of obesity-related chronic diseases, such as type II diabetes and hypertension in adolescents, foretell a larger burden of disease if action to reverse them is not taken.

The key determinants of physical activity include demographic factors (such as age and socioeconomic status), psychological factors (such as perceived competence and enjoyment), and social factors (such as encouragement from parents or peers, cultural attitudes) and the physical environment (such as the availability of opportunities to be active).

Low physical activity disproportionately affects socially disadvantaged groups, who have less free time or poorer access to leisure facilities or live in environments that do not support physical activity (8). Fear of traffic can be a powerful deterrent for parents wishing to allow their children to walk or cycle to school or play outdoors, especially in deprived areas which are often characterized by poor road safety and fast traffic (9). Longer travel distances, fewer green spaces and urban planning policies resulting in increasing urban sprawl play an important role in discouraging physical activity and increasing dependence on motorized transport (10,11).

In addition to environmental conditions, physical education in schools is important in the total amount of physical activity undertaken by children. Recent publications (5,11–13) highlight this issue and show that the amount of physical education at school and the way it is organized vary from country to country. Evidence-based guidelines on developing good physical education in schools are available, such as those published by the United States Centers for Disease Control and Prevention.

## POLICY RELEVANCE AND CONTEXT

In 2004, the Fourth Ministerial Conference on Environment and Health adopted the Children's Health and Environment Action Plan for Europe (14), which includes four regional priority goals to reduce the burden of environment-related diseases in children. One of the goals (RPG II) aims to reduce mortality and morbidity from injuries, including from road traffic injuries, and to provide safe conditions which also facilitate more physical activity among children.

Policies promoting physical activity in children and adolescents are still a relatively new field for action. Recent policy developments at global level and in the Region, as well as at European Union (EU) level follow several key princi-

ples targeting the key determinants of physical activity, as stated in the previous section (11). The WHO Global Strategy on Diet, Physical Activity and Health (6) reflects Member States' increasing recognition that physical activity must be considered alongside a healthy and balanced diet in the fight against the growing NCD burden. WHO and other agencies are actively collaborating with sports bodies in programmes such as Sports for All, aimed at increasing access to sport across population groups. A special focus is being placed upon partnership-based action to promote physical activity and sport among both boys and girls, in and out of schools. The European Charter on Counteracting Obesity, adopted in November 2006 at the WHO European Ministerial Conference on Counteracting Obesity (15), recognized the role of physical activity beyond the benefits related to reducing overweight and obesity. The Charter endorsed a vision of societies "where healthy lifestyles related to diet and physical activity are the norm", and "where healthy choices are made more accessible and easy for individuals". This means not only the classic health promotion approaches but also the creation of opportunities for daily physical activity, for example through the promotion of cycling and walking by better urban design and transport policies.

The document Promoting physical activity for health – a framework for action in the WHO European Region, also presented at the Conference, provides guidance to Member States, experts and policy-makers on designing and implementing policies and activities which, through multisectoral cooperation, promote physical activity as part of the national public health agenda (16).

In 2005, the European Union (EU) launched the Green Paper Promoting healthy diets and physical activity: a European dimension for the prevention of overweight, obesity and chronic diseases (13). The purpose of the paper was to consult stakeholders with the aim of identifying a possible contribution at EU level of promoting healthy diets and physical activity. In parallel with the consultation, the proposal on health claims and a review of food labelling legislation, the Commission is working with a wide range of players across the public, private and nongovernmental sectors.

In the same year, the EU also launched the EU platform on diet, physical activity and health (4). Under the leadership of the European Commission, the platform brings together stakeholders from commercial, professional, consumer and other civil organizations to take voluntary action to halt and, hopefully, reverse the rise in obesity, particularly among children. The spirit of the platform is to work

under the leadership of the European Commission and to provide an example, which others will choose to follow across Europe, of coordinated but autonomous action by different parts of society to deal with the many aspects of the problem.

## ASSESSMENT

Physical activity levels in children and adolescents are low and decline with age: 11-year-olds are more physically active than 13- and 15-year-olds. Across all the countries in the HBSC study, about one third of all children (39%) report taking physical activity at a level that meets the current guidelines. However, there is a wide variability in reported physical activity among European countries, ranging from 25% to 61% for boys and from 11% to 51% for girls in France and Ireland, respectively. Important factors that may explain some of the wide geographical differences are likely to be linked to environmental factors supporting physical activity, particularly possibilities of active travel to school, the availability of leisure facilities and supportive built as well as social environments. Other factors include the degree to which sedentary behaviour such as television and computer screen-time are effectively limited both in the home and through school-based and other extracurricular programmes.

While patterns of physical activity varied significantly according to country, age and gender group, in most countries boys were more active than girls, and activity declined with age in both genders. This gives particular concern for girls, who consistently across the participating countries and in the three ages under study are less physically active than boys. At 15 years of age, only about 22% of girls report being physically active at the level recommended by the MVPA guidelines.

On a Regional population scale, children do not take enough physical activity, particularly girls and adolescents. Efforts are needed to increase physical activity at all ages and to provide venues for keeping this up throughout life. Further, as there is greater likelihood that physically active children, as compared to inactive ones, will be more active in later life as well, it is perceivable that the effects of physical activity on adults' health can be influenced by increasing and maintaining active behaviour in young people.

The HBSC study should be continued, using the same methodology and wider participation of all Member States of the European Region, to allow for geographical patterns and time trends to be assessed, as well as changes in physical activity according to age.

## DATA UNDERLYING THE INDICATOR

### Data source

HBSC 2001/2002 study (2).

### Description of data

Number of children reporting that they were physically active for a total of 60 minutes a day (not necessarily at the same time); number of children at school.

The description of physical activity used in the HBSC study is as follows (1,2).

Physical activity is an activity that increases your heart rate and makes you get out of breath some of the time. Physical activity can be done in sports, school activities, playing with friends, or walking to school. Some examples of physical activity are running, brisk walking, roller boarding, biking, dancing, skateboarding, swimming, soccer, basketball, football, and surfing.

### Method of calculating the indicator

$100 \times (\text{NChild}/\text{TChild})$ , where NChild is the number of children of a given age meeting the MVPA guidelines and TChild is the total number of children of a given age at school.

The screening measure consisted of two questions relating to the number of days that adolescents undertake physical activity of at least moderate intensity for at least 60 minutes. The first question asked about physical activity undertaken in the previous week, and the second, about a typical week.

The response categories for both were: 0,1,2,3,4,5,6,7 days.

Scores were calculated by averaging the results for the two items. A score of 5 or more classified the respondent as meeting the primary recommendation of more than one hour of moderate activity a day on most days.

### Geographical coverage

Austria, Belgium (Flanders), Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Latvia, Lithuania, Malta, the Netherlands, Norway, Poland, Portugal, the Russian Federation, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Ukraine, the United Kingdom (England, Scotland and Wales).

### Period of coverage

2001/2002 study.

### Frequency of update

HBSC studies are carried out at four-year intervals. The 2001/2002 study was the sixth and most recent in the series.

### Data quality

The data are collected in all participating countries and regions through school-based surveys, using the international research protocol.

## References

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## Further information

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## Authors:

Maja Muszyńska-Graca, Beata Dabkowska, Institute of Occupational Medicine and Environmental Health, Sosnowiec, Poland.